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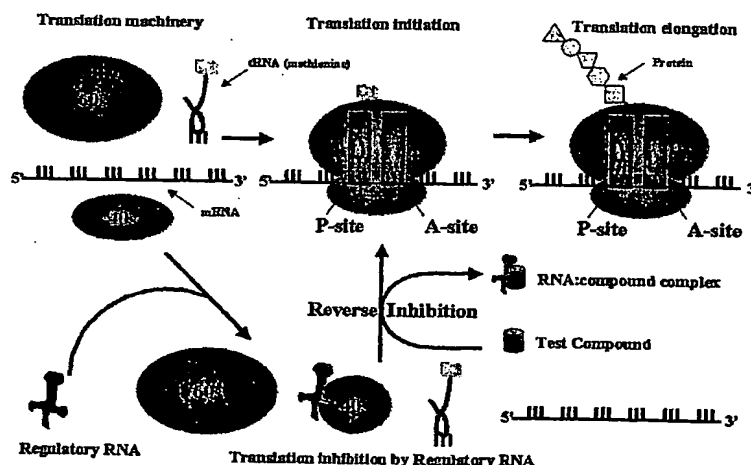
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(54) Title: METHODS AND SYSTEMS FOR THE IDENTIFICATION OF RNA REGULATORY SEQUENCES AND COMPOUNDS THAT MODULATE THEIR FUNCTION



(57) Abstract: The present invention is directed to a non-cell based method for identifying RNA regulatory sequences involved in translational control. The method includes: combining a translational extract; an RNA test sequence; and a reporter mRNA under suitable conditions for translation of the reporter mRNA. The method also includes measuring the effect of the test sequence on the translation of the reporter mRNA, wherein a test sequence that modifies the translation of the reporter mRNA includes an RNA regulatory element. The invention also provides methods and systems for identifying test compounds that modulate the regulatory activity of an RNA regulatory sequence. In the method, an RNA regulatory sequence, which regulates translation of a reporter mRNA, is combined with a translation extract; the reporter mRNA; and at least one test compound. The method further includes measuring the effect of the test compound on the ability of the RNA regulatory sequence to regulate the translation of the reporter mRNA.

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